WHAT IS CLAIMED IS:

1. A product application device, comprising:

a receptacle having a variable inside volume configured to contain product;

an applicator element;

a housing for receiving at least part of the applicator element;

a closure element configured to close the housing in a substantially leak-proof manner when the applicator element is received at least partially in the housing; and

a dip tube configured to extend substantially to the bottom of the receptacle,

wherein the dip tube is configured to enable the housing to be in flow communication with product flowing from the receptacle.

2. The device of claim 1, wherein the device is configured to allow a reduction in the variable inside volume of the receptacle from a first volume to a second volume smaller than the first volume, and

wherein the reduction from the first volume to the second volume generates pressure inside the receptacle for causing product to flow into the housing via the dip tube.

3. The device of claim 1, comprising product contained in the receptacle, wherein the level of product contained in the receptacle is selected so that, prior to first use, an end of the dip tube configured to extend substantially to the bottom of the receptacle lies above the level of product when the receptacle is turned upside-down.

4. The device of claim 1, wherein the dip tube communicates with the housing at a bottom end of the housing.

5. The device of claim 1, wherein the housing comprises an end wall located at a bottom end of the housing.

6. The device of claim 5, wherein the end wall is planar.

7. The device of claim 5, wherein the end wall is substantially concave towards a portion of the housing in which the applicator element is received.

8. The device of claim 1, wherein the dip tube is a separate element fixed to the housing.

9. The device of claim 5, wherein the dip tube is fixed to an end-piece integrally formed with the end wall.

10. The device of claim 5, wherein the dip tube is integrally formed with the end wall.

11. The device of claim 1, wherein the applicator element is removable from the housing.

12. The device of claim 1, wherein the applicator is fixed to the closure element.

13. The device of claim 12, wherein the closure element is configured to define a handle.

14. The device of claim 1, wherein the applicator element is fixed to the housing.

15. The device of claim 12, wherein the housing comprises an end wall, and wherein the applicator element is configured to contact the end wall of the housing when the applicator element is received in the housing.

16. The device of claim 1, wherein the housing comprises an end wall, and wherein the applicator element and the end wall of the housing define a gap therebetween when the applicator element is in place on the receptacle, the gap being configured to allow product to accumulate therein.

17. The device of claim 16, wherein at least a portion of the applicator element comprises a surface having a recess configured to face the end wall of the housing when the applicator element is received in the housing.

18. The device of claim 16, wherein the end wall comprises a recessed portion extending away from the applicator element when the applicator element is received in the housing.

19. The device of claim 16, wherein the end wall includes an annular rim configured to contact the applicator element when the applicator element is received in the housing.

20. The device of claim 5, wherein the housing further comprises an intermediate wall situated between the applicator element and the end wall when the applicator element is received in the housing.

21. The device of claim 5, further comprising a porous pad located on the end wall of the housing and configured to contact the applicator element when the applicator element is received in the housing.

22. The device of claim 21, wherein the porous pad comprises foam material.

23. The device of claim 1, wherein at least one of the closure element and the housing defines a removable unit configured to be associated with the receptacle to fill the unit with product, and

wherein the applicator element is received within the removable unit.

24. The device of claim 23, wherein the housing defines a body and the closure element defines a handle, the body and the handle cooperating to define an inside space in which the applicator element is contained.

25. The device of claim 24, wherein the inside space is substantially leak-proof.

26. The device of claim 24, wherein the handle and the body are connected by screw fastening.

27. The device of claim 24, wherein at least one of the handle and the body of the removable unit comprises a sealing skirt.

28. The device of claim 24, wherein the removable unit comprises a check valve configured to allow product under pressure to pass to the inside space of the removable unit.

29. The device of claim 23, further comprising a portion configured to removably receive at least part of the removable unit, wherein the portion is located on the receptacle.

30. The device of claim 28, further comprising a second closure element for closing the portion when the removable unit is not received by the portion.

31. The device of claim 29, wherein the portion is configured to be in flow communication with the variable inside volume via the dip tube.

32. The device of claim 29, wherein the portion comprises a sleeve having an open end through which said at least a part of the removable unit passes and another end placed in flow communication with the variable inside volume via the dip tube.

33. The device of claim 1, wherein the applicator element is compressible.

34. The device of claim 1, wherein the applicator element is not compressible.

35. The device of claim 33, wherein the applicator element comprises a foam formed of a plastic material.

36. The device of claim 35, wherein the plastic material is chosen from polyurethane, polyester, polyether, PVC, and NBR.

37. The device of claim 34, wherein the applicator element comprises a sintered material.

38. The device of claim 37, wherein the sintered material is chosen from polyethylene, PVC, EVA, polyamide, and brass.

39. The device of claim 1, wherein the applicator element comprises felt.

40. The device of claim 1, further comprising product contained in the receptacle, wherein the product comprises a cosmetic product.

41. The device of claim 40, wherein the cosmetic product is perfume.

42. The device of claim 1, wherein the receptacle comprises a flexible-walled receptacle.

43. The device of claim 1, wherein the receptacle further comprises a bellows.

44. The device of claim 1, wherein the receptacle comprises a case having a bag therein, wherein the case is configured to cause an increase in pressure in the bag.

45. The device of claim 44, wherein the case is provided with a check valve configured to allow air to be drawn into the case after a quantity of product has been expelled from the bag.

46. The device of claim 43, wherein the dip tube is secured to a portion of the receptacle situated above the bellows.

47. The device of claim 1, wherein the device is configured so that the device is capable of moving from a first configuration wherein the dip tube does not extend substantially to the bottom of the receptacle to a second configuration wherein the dip tube extends substantially to the bottom of the receptacle.

48. The device of claim 1, wherein the housing comprises an open end and wherein the closure is configured to close the open end.

49. The device of claim 1, wherein the closure element and the housing each comprise screw threading configured to enable removable coupling of the closure element and the housing.

50. A product application device, comprising:

a receptacle having a variable inside volume configured to contain product;

an applicator element;

a first portion and a second portion configured to cooperate together to define a substantially leak-proof enclosure for the applicator element; and

a dip tube configured to extend to the bottom of the receptacle,

wherein the dip tube is configured to enable the enclosure to be in flow communication with product flowing from the receptacle.

51. The device of claim 50, wherein the first portion comprises a housing for receiving at least part of the application element, and the second portion comprises a closure element configured to close the housing.

52. The device of claim 50, wherein the first and second portions cooperate to define a removable unit.

53. The device of claim 50, wherein the device is configured to allow a reduction in the variable inside volume of the receptacle from a first volume to a second volume smaller than the first volume, and

wherein the reduction from the first volume to the second volume generates pressure inside the receptacle for causing product to flow into the enclosure via the dip tube.

54. The device of claim 50, comprising product contained in the receptacle, wherein the level of product contained in the receptacle is selected so that, prior to first use, an end of the dip tube configured to extend substantially to the bottom of the receptacle lies above the level of product when the receptacle is turned upside-down.

55. The device of claim 50, wherein the dip tube communicates with the enclosure at a bottom end of the enclosure.

56. The device of claim 50, wherein one of the first portion and the second portion comprises an end wall located at a bottom end of the enclosure.

57. The device of claim 56, wherein the end wall is planar.

58. The device of claim 51, wherein the closure element is configured to define a handle.

59. The device of claim 51, wherein the applicator element is fixed to the housing.

60. The device of claim 50, wherein the first and second portion are connected by screw fastening.

61. The device of claim 50, wherein the first and second portion are connected by snap fastening.

62. The device of claim 50, wherein the first and second portion are connected by a hinge.

63. The device of claim 50, wherein at least one of the first portion and second portion comprises a sealing skirt.

64. The device of claim 50, wherein one of the first portion and the second portion comprises a check valve configured to allow product under pressure to pass to the inside space of the enclosure.

65. The device of claim 52, further comprising a third portion located on the receptacle, wherein the removable unit is configured to be removably associated with the third portion.

66. The device of claim 65, wherein the dip tube is connected to the third portion.

67. The device of claim 65, further comprising a closure element for closing the third portion when the removable unit is not associated with the third portion.

68. The device of claim 65, wherein the third portion is configured to be in flow communication with the variable inside volume via the dip tube.

69. The device of claim 65, wherein the third portion comprises a sleeve having an open end through which at least a part of the removable unit passes and another end placed in flow communication with the variable inside volume via the dip tube.

70. The device of claim 65, wherein the third portion comprises a protrusion for mating with a mating opening located at an end of the removable unit.

71. The device of claim 50, further comprising product contained in the receptacle, wherein the product comprises a cosmetic product.

72. The device of claim 71, wherein the cosmetic product is perfume.

73. The device of claim 50, wherein the receptacle comprises a flexible-walled receptacle.

74. The device of claim 50, wherein the receptacle further comprises a bellows.

75. The device of claim 50, wherein the receptacle comprises a case having a bag therein, wherein the case is configured to cause an increase in pressure in the bag.

76. The device of claim 75, wherein the case is provided with a check valve configured to allow air to be drawn into the case after a quantity of product has been expelled from the bag.

77. The device of claim 74, wherein the dip tube is secured to a portion of the receptacle situated above the bellows.

78. The device of claim 50, wherein the device is configured so that the device is capable of moving from a first configuration wherein the dip tube does not extend substantially to the bottom of the receptacle to a second configuration wherein the dip tube extends substantially to the bottom of the receptacle.

79. The device of claim 50, wherein the application element is fixed to one of the first portion and the second portion.

80. The device of claim 79, wherein the applicator element is fixed to the second portion and the second portion defines a handle.

81. The device of claim 79, wherein the applicator element is fixed to the first portion and the first portion is fixed to the receptacle.

82. A product application system, comprising:

the device of claim 50; and

at least one additional receptacle comprising a variable inside volume configured to contain product and a dip tube configured to extend to the bottom of the additional receptacle,

wherein the dip tube of the at least one additional receptacle is configured to enable the enclosure to be in flow communication with product flowing from the at least one additional receptacle.

83. The system of claim 82, comprising product in the receptacles, wherein each of the receptacles contains a differing product.